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ABSTRACT

This review of the current status of program evaluation in vocational rehabilitation focuses on: (1) describing current motivation for conducting program evaluation in state rehabilitation agencies; (2) identifying the current status of program evaluation in state agencies; (3) reviewing existing program evaluation models; and (4) defining developments which are needed to facilitate the improvement of program evaluation in state agencies. A fairly extensive bibliography is included. (PFS)

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MICHIGAN STUDIES IN REHABILITATION

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# Program Evaluation Approaches for State Rehabilitation Agencies: Current Status and Future Directions

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## Preface

In response to the 1973 Rehabilitation Act, the University of Michigan established a Rehabilitation Research Institute (UM-RRI), with funding from the Department of Health, Education and Welfare, Rehabilitation Services Administration. The mission of the UM-RRI is to conduct research in rehabilitation program evaluation.

The long range objectives which the UM-RRI will address are as follows:

1. Develop alternative conceptual models that may be used as a framework for comprehensive program evaluation in the Federal-State Rehabilitation program.
2. Identify, design, develop, test, validate, demonstrate and disseminate program evaluation instruments, techniques, and methodologies that are consistent with conceptual models for comprehensive program evaluation in rehabilitation.
3. Develop criteria for designing, developing, testing, and validating new and existing program evaluation instruments, techniques, and methodologies that consider measurement of impact, effectiveness, effort, efficiency, and output.
4. Review and conduct research on existing program evaluation instruments to determine their

feasibility for current use and to determine their need for additional development and validation.

5. Develop a handbook of program evaluation instruments, techniques, and methods that may be used by evaluators in the Federal-State rehabilitation program.
6. Develop a thesaurus of program evaluation terminology that will serve as a basis for achieving a common terminology in program evaluation.
7. Conduct periodic research utilization conferences to demonstrate the use of techniques, instruments, methods in rehabilitation program evaluation to encourage the utilization of evaluation strategies by program evaluators in the Federal-State rehabilitation program.
8. Conduct periodic needs assessment through a variety of means to determine existing and continuing needs for research and development of specific instruments and techniques that will advance rehabilitation program evaluation technology beyond what is required by the current General Standards of Evaluation of Programs in accordance with the 1973 Rehabilitation Act.

This review paper represents one of the major accomplishments of the Rehabilitation Research Institute during its first year of existence. An assessment of the needs in program evaluation will continue to be conducted in a

periodic basis.

The contributions made by the staff of the Rehabilitation Research Institute in developing the review paper is acknowledged. Special appreciation is expressed to Ralph Crystal, Betty DeWolf, Robert Duguay and Anna Schenk for their valuable contributions which made this document a reality.

Don K. Harrison

September, 1977

# CHAPTER I

# THE CONTEXT OF STATE VOCATIONAL REHABILITATION AGENCY PROGRAM EVALUATION

## Introduction

This monograph provides a review of the current status of program evaluation in vocational rehabilitation. The focus is on describing current motivation for conducting program evaluation in state rehabilitation agencies, identifying the current status of program evaluation in state agencies, reviewing existing program evaluation models, and defining developments which are needed to facilitate the improvement of program evaluation in state agencies.

## Program Evaluation as a Component of Program Development

In recent years, there have been both internal and external motivations for the development of program evaluation efforts in state vocational rehabilitation agencies. Externally, there has been increased demand for accountability in human services, reorganization of the Rehabilitation Services Administration, the Vocational Rehabilitation Act (1973), the development of nine Federal program evaluation standards with their continuing refinement, and Rehabilitation Services Administration funding of developmental efforts related to program evaluation. All of these have

provided major stimulus for program evaluation efforts within state agencies. One of the most significant results of these motivations is the growing emphasis on data-based program development. Because of this, program planning, implementation, and improvement have been integrally tied to program evaluation. Therefore, before more closely examining the state-of-the-art of program evaluation, it is important to define and understand the context of state agency program development.

## The Program Development Process

Figure 1 describes the state agency program development process. As indicated, the goal of program development is to design optimal programs which help clients achieve specified outcomes utilizing available staff and resources. The program development cycle includes a number of steps which can be used continuously to insure the programs are appropriate for those clients being served, that program procedures are implemented efficiently, and that client outcome data are used to guide program decisions.

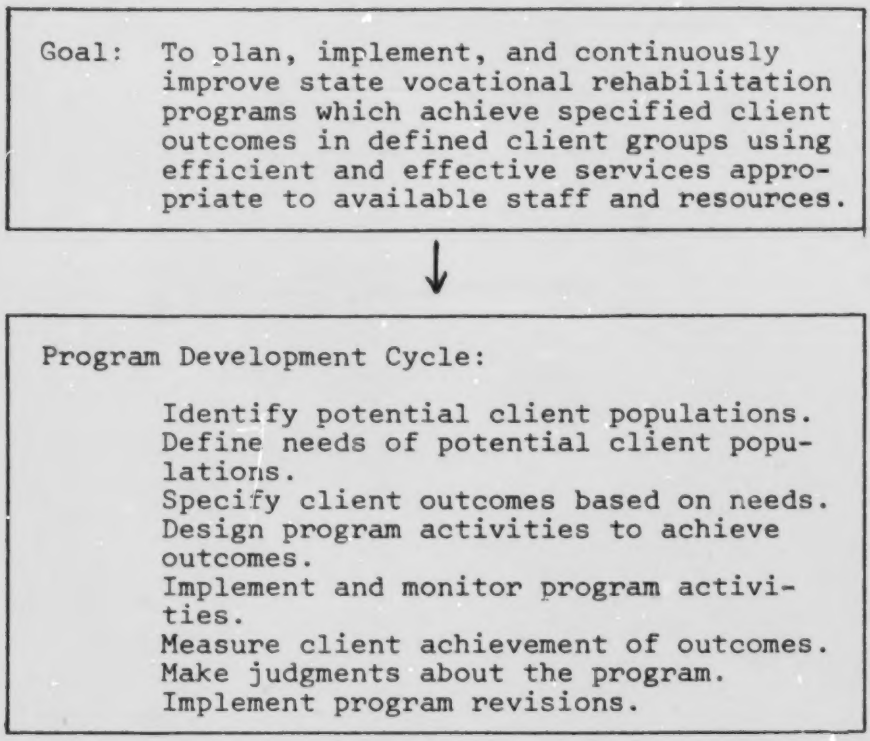
Goal: To plan, implement, and continuously improve state vocational rehabilitation programs which achieve specified client outcomes in defined client groups using efficient and effective services appropriate to available staff and resources.
Program Development Cycle:
Identify potential client populations.
Define needs of potential client populations.
Specify client outcomes based on needs.
Design program activities to achieve outcomes.
Implement and monitor program activities.
Measure client achievement of outcomes.
Make judgments about the program.
Implement program revisions.

Figure 1 - State Agency Program Development Process

The Program Development Context

In addition to understanding the state agency program development process, it is important to clarify the context in which this process occurs. A state rehabilitation agency is an organization which has a number of components and which exists within a larger socio-economic context containing a number of elements with which the agency must link. Utilization of program development procedures relies on both the effective involvement of and communication between components within a state agency and on effective information about and linkage with elements of the large socio-economic context.

Figure 2 overviews the context of state agency program development.

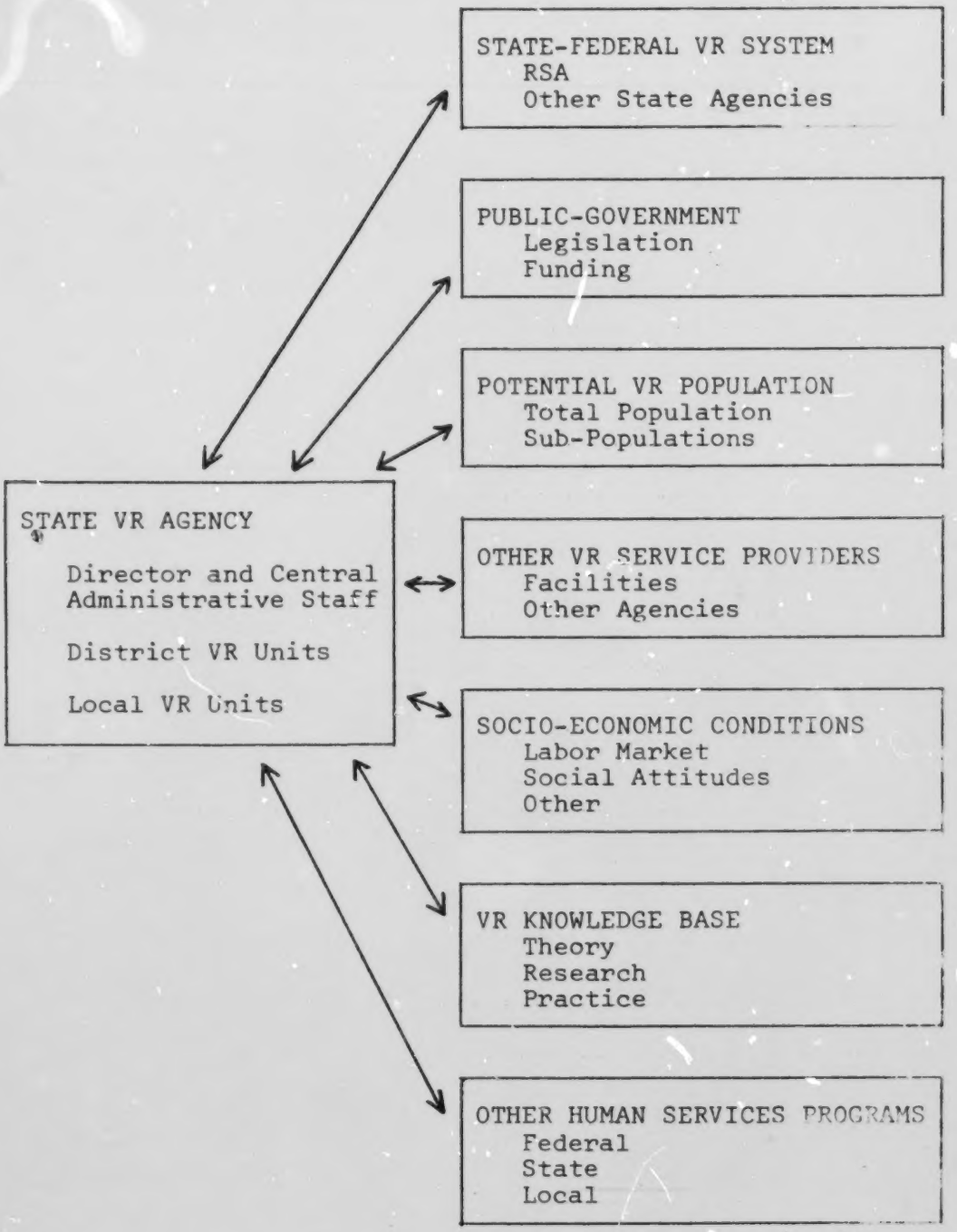


Figure 2 - Context of State Agency Program Development

## Program Evaluation Needs

A major finding of the literature review was that there are a diversity of definitions of program evaluation in the field of vocational rehabilitation. Therefore, to provide an early frame of reference, it is helpful to define some requirements of program evaluation which are used in state rehabilitation agencies.

First, program evaluation approaches must either be developed for or adapted for utilization in state rehabilitation agencies. This means that models should relate directly to the structure and goals of state agencies, and should address such questions as feasibility of use and appropriateness of information for state agencies. Secondly, program evaluation models should be comprehensive enough to provide a variety of information needed to make decisions about rehabilitation programs. It should be noted that an interest in program evaluation has shifted the focus from rehabilitation services to rehabilitation programs. While services do not necessarily rely on systematic planning utilizing various types of data, programs emphasize program development and implementation procedures which include such steps as needs assessment, goal setting, selection of diverse strategies, and monitoring of program outcomes. Finally, program evaluation models should assume state agency commitment to a continuous process of collecting, analyzing and utilizing data for making decisions. Evaluation is not an

activity which is completed independently rather; it is a process involving a number of individuals and groups which is an integral aspect of the planning and delivery of state agency programs.

As evaluation approaches are reviewed, it will be helpful to examine these in light of three aspects:

1. Do they provide specific information which allows their utilization by state agencies?
2. Are they comprehensive enough to provide a variety of information needed for making decisions about rehabilitation programs?
3. Do they suggest ways of utilizing evaluation data in the continuous process of state agency program planning and implementation?

Motivation for State Agency Program Evaluation

The external pressures upon the vocational rehabilitation network were expressed by a reorganization of Rehabilitation Services Administration in 1970-71 and by the passage of the Rehabilitation Act of 1973. These measures were an attempt from within the vocational rehabilitation ranks to stimulate program evaluation within state agencies. Collignon (1973) suggests that the reorganization of Rehabilitation Services Administration in 1970-71 resulted from increased concern in the executive and legislative branches for accountability and from the increased challenges of program development. This reorganization resulted in state

agencies and the Commissioner's office assuming responsibility for program evaluation and the development of evaluation methodology, the creation of a division of program management to assume responsibility for the management of the performance of state agencies and special programs, the funding of outside evaluation projects and short-term training conferences related to program evaluation, and increased requests from regional and state offices for program evaluation assistance.

The Rehabilitation Act of 1973 mandated program evaluation through the development of program evaluation standards:

1. To establish criteria for the evaluation of program effectiveness, i.e., degree to which the rehabilitation system is accomplishing its stated objective.
2. To increase program accountability by focusing on those demonstrated processes generally agreed to increase program effectiveness.
3. To encourage States to begin a more comprehensive evaluation of their programs to determine if the program goals are being achieved within resource capabilities, and if not, the reasons therefor.

The Arkansas Rehabilitation Research and Training Center (Rubin, 1974) has summarized the nine standards into the following three program evaluation goals:

1. <u>Evaluate the population eligible for rehabilitation</u>:

   Standard One: . . . to serve the target population equitably.

2. Evaluate the process of rehabilitation:

   Standard Four: to use resources efficiently.

   Standard Five: to ensure manageable caseloads for counselors.

   Standard Three: to avoid undue delays in the process.

   Standard Seven: to provide needed post-employment benefits.

3. Evaluate the outcomes of rehabilitation:

   Standard Nine: to ensure client satisfaction with the written rehabilitation program.

   Standard Two: to place clients in relevant gainful employment.

   Standard Six: to ensure retention of the benefits achieved through rehabilitation.

   Standard Eight: to identify why clients are not successfully rehabilitated.

Recent developments which have motivated the development of program evaluation approaches for state rehabilitation agencies are directed toward strengthening program development by the increased use of program evaluation information in agencies decision making. Specifically, the current evaluation standards stress the need for evaluation information related to program inputs (nature of client population), program processes (nature of treatment and other agency

characteristics), and program outcomes (nature of client changes resulting from the program).

To facilitate further clarification, a distinction between research, evaluation research, and program evaluation will be made. Complete agreement among writers in the field does exist regarding a definition of these terms. The definitions presented here were taken from several sources.

Oetting (1976) states that scientific inquiry (research) is aimed at the advance of scientific knowledge. There is little need for such research to be immediately useful or practical. Evaluation research has a different purpose. It is aimed at collecting data that will help in making decisions about programs. The decisions often involve further evaluation, but cannot simply be "we must wait for research" (p.11). Bozarth (1974) indicates that "good" evaluation (research) is the same as "good" research. The evaluation research design should have good internal validity allowing confidence in the results and good external validity allowing for the practical application of the results within specified populations (p.143). Both research and evaluation research use experimental design procedures, i.e., experimental and control groups, random sampling and random assignment to groups, and pretest and posttest procedures.

Program evaluation addresses itself to broad questions such as the determination of agency effectiveness, benefit-cost analysis, program planning, organizational development, and program efficiency. These areas may be assessed by

several methods. Among these are evaluation of data contained on the R-300 reporting form, case review and monitoring and follow-up studies to determine client satisfaction and job sustention rates. Such studies may not necessarily be conducted within an experimental design framework. Program evaluation studies generally are addressed to immediate rehabilitation agency needs and concerns. They are often retrospective, that is, they reconstruct what has already taken place as a means of answering questions regarding agency functioning.

Summary of Context of State Agency Program Evaluation

This chapter has overviewed program evaluation in the perspective of its relationship to rehabilitation program development. The following generalizations can be drawn from this overview:

1. Within the current context of rehabilitation, program evaluation may be defined as the systematic design, collection, and use of information needed to make decisions about rehabilitation programs. Program evaluation efforts parallel program planning activities and the specific program evaluation design utilized at any point in the planning process will be determined by the nature of the program decision to be made.
2. Recent developments, including general demand for greater accountability of human services programs,

reorganization of Rehabilitation Services Administration, the Vocational Rehabilitation Act (1973), and the continuing development of Federal evaluation standards, have provided a major motivation for the development of state agency program evaluation procedures. Inherent in the intent of these developments is a shift from previously used program development and management methods to a data-based decision making model. Attempts to mandate and define program evaluation standards are an indication of this new emphasis on program justification, planning, and renewal based on the ongoing use of program evaluation data as a basis for decision making.

3. Because of this recent redefinition, any discussion of state agency program evaluation must be preceded by a clear understanding of the state agency program development process and of the context within which this process occurs. The goal of state agency program development is to plan, implement, and continuously improve state vocational rehabilitation programs which achieve specified client outcomes in defined client groups using efficient and effective services appropriate to available staff and resources. To achieve this goal, a program development cycle is used which includes several steps. When utilizing this program development

model, each state agency needs to clearly analyze and form linkages between components within the agency and between the agency elements and within the larger socio-economic context.

4. State agency program evaluation is an integral part of the new program development emphasis. Program evaluation provides specific information at appropriate points throughout the process thus enabling state agency personnel at various levels throughout the agency to better understand the total context within which the state agency operates and to make data-based decisions at each step of the program development cycle.

# CHAPTER II

# CURRENT STATUS OF PROGRAM EVALUATION IN STATE AGENCIES

## Introduction

Chapter I of this monograph provided an overview of the context of state rehabilitation program evaluation. This chapter provides an overview of the current status of state agency program evaluation. Chapter III provides a review of comprehensive program evaluation approaches which have been developed for application in state rehabilitation agencies. Both Chapters II and III are based on a broad review of the literature related to rehabilitation program evaluation. Major sources for the literature search included a computer search of the National Technical Information Service (NTIS) and Education Resources Information Center (ERIC) files, and an on-site review of the ICD-RUL collection on rehabilitation program evaluation.

Several hundred literature items related to rehabilitation program evaluation were identified through these search procedures. Many of these items were reviewed during the process of conceptualizing this monograph. In general, the literature, while fairly large, is difficult to organize conceptually because of its great diversity, e.g., differing definitions of program evaluation, targeted to diverse audiences, and mixed in terms of level of specificity.

Since the goal of this first monograph is to provide a broad, conceptual scheme which can be used to identify needs and to guide the development of materials related to state agency program evaluation, a relatively small number of items were selected from those materials identified in the literature review. These items are described at length in this monograph because they are particularly helpful in developing the broad conceptual scheme.

## Major Studies Describing the Current Status of the State

Two major studies provide in depth information about the current status of state agency program evaluation. The state-of-the-art of program evaluation prior to 1973 was surveyed by Ridge (1973) and Collignon (1973). No study of state agency practices comparable to this study has been widely conducted since the Rehabilitation Act (1973).

However, in response to the 1973 Act and to the publication of the nine standards in 1974, the Arkansas Rehabilitation Research and Training Center (Rubin, 1974) coordinated a nationwide project to help state agencies respond to the new mandates for program evaluation. The project consisted of three phases. Phase I was a National Program Evaluation Conference held in Memphis, Tennessee, on September 30 through October 2, 1974. The purpose of this conference was to disseminate program evaluation materials and to create ten regional study groups which were to design, carryout, and write the results of a program evaluation activity over

a six month period. Phase II involved the completion of the studies by the individual study groups. Phase III was a second National Training Institute held in New Orleans on April 9, 10, and 11, 1975, to communicate the results and experiences of the ten regional program evaluation study teams. These regional study group reports provide information about program evaluation activities emerging in response to the 1973 Rehabilitation Act.

## State-of-the-Art Before the Nine Standards: Project for Cost Benefit Analysis and Evaluation of Rehabilitation Services (Ridge, 1973; Collignon, 1973)

### Overview

A survey of current state agency program evaluation practices was conducted as part of the Project for Cost Benefit Analysis and Evaluation of Rehabilitation Services (Ridge, 1973; Collignon, 1973). The data were collected through a questionnaire mailed to 79 state agencies, of which 51 were general state vocational rehabilitation agencies and 28 were for the blind and visually handicapped only. The results reported were based on 69 returns, of which 46 were from the general state agencies and 23 from agencies for the blind. The study explored these questions:

1. Who does the evaluation?
2. Who is involved in the evaluation procedure?
3. What types of program evaluation studies are completed?

4. What are the data sources used?
5. What types of measures are used to identify results?
6. How are the evaluation results utilized?

Evaluation Personnel

The question of who did program evaluation was explored along the following dimensions:

1. The number of agencies allocating special units to do program evaluation;
2. The number of man-years spent in planned evaluation;
3. The relation of program evaluation units and time to agency size and level;
4. The background and training of persons assigned to do evaluation.

Of the agencies replying to the study, 72% of the general agencies and 39% of the blind had formally designated evaluation units. The blind agencies on the average committed less than three man-years to program evaluation. Among general agencies, more than one-half had either no program evaluation unit or less than one man-year in such activity. Larger agencies tended to allocate more time to evaluation. Evaluation was usually conducted at the central office level with district and local offices that did perform evaluation activities usually spending less than two man-years in such activity.

Only 45% of the agencies reported that the personnel

assigned to evaluation units had received direct training in evaluation. Most often training had been received as on-the-job learning rather than through workshops or training programs in evaluation. The highest number of program evaluators had moved to that position from the rehabilitation counseling ranks. The second most prevalent background for program evaluators was education followed by such areas as economics, statistics, or business administration.

Evaluation Participants

Who was involved in program evaluation activity is important since administrators, supervisors, and state central office personnel have different and perhaps unique perspectives on the rehabilitation process. Ridge (1973) hypothesized that the potential implementation of changes suggested by the evaluation relies on the confidence of field personnel in the results. Such confidence would be increased by the involvement of personnel at all levels in the planning and implementing of program evaluation. The results, however, showed that regional/district administrators, supervisors, and counselors were routinely consulted by only half of the state agencies program evaluators. None of those groups were consulted when designing evaluation procedures. Supervisors, however, were consulted more often than either of the two other groups in establishing priorities, conducting the evaluation, interpreting the findings, and implementing indicated changes. Counselors were

consulted least frequently. Only 15 agencies indicated that clients or their representatives were involved in any way.

Types of Evaluations Completed

Categorization of the types of evaluation problems did not result in any clear pattern. Such topics as the evaluation of specific disability groups, of case procedures, of field services, of cooperative programs, of training programs, and of "high-producing" counselors were reported.

Reasons for selecting programs to evaluate did suggest several important criteria. The most common reasons for selection were: the size of the program; a special interest in the program by the staff; the disability type served; and the amount of problematic difficulty associated with a segment of the program. Ridge (1973) concluded that, "routine evaluation of all programs is not apparently undertaken by most rehabilitation agencies" (p. 10).

A review of the types of evaluation methodologies used indicated that about half of the agencies rarely or never conducted follow-up studies with those studies which were conducted focusing primarily on successfully (26 closures) closed clients. Most of the follow-up studies took place seven months to one year after closure. Only 29% were conducted more than one year after closure. Ridge (1973) expressed the concern that those follow-up studies conducted less than three months after closure would not meet the

requirements for status 26 inclusion.

Collignon (1973) suggests that case review procedures are most frequently used in the agency setting, whereas more sophisticated methods such as case flow analysis and follow-up studies are less frequently used. Therefore, few state agencies are using evaluation techniques which evaluate the impact of the rehabilitation procedures on clients.

Types of Measures Used to Identify Results

Information about the types of measures used in program evaluation indicates that there is an inverse relationship between frequency of use and level of sophistication of evaluation measures (Collignon, 1973). Case review is the least sophisticated measure. While this technique audits and monitors case records, it does not provide information about the impact of rehabilitation programs other than status information. Case flow analysis is more sophisticated. It correlates the number and cost of cases with statuses, and compares frequencies to standards of performance to identify "good" and "bad" programs. This technique, however, examines only program inputs and program processes thus providing only lower-order efficiency information. Higher-order measures are needed which relate program outcomes to program inputs, costs, and processes. Such techniques as follow-up studies, cost-benefit analysis, and comparisons of alternative program strategies can provide this information.

Ridge (1973) presents a listing of the types of measures

being utilized in program evaluation. These measures, in decreasing order of frequency, are:

1. The cost per rehabilitation (26) closure.
2. The ratio of successful closures (26's) to total closures.
3. The percentage of applications accepted.
4. The time from referral to plan formulation.
5. The rehabilitations (26 closure) per counselor or per man-year.
6. The number of clients per counselor or per man-year.
7. The time from plan formulation to closure.

The ratio of successful to total closures and the cost per rehabilitation were the measures reportedly used most often on a routine basis. Three other measures (cost-benefit ratios, payback periods, and payback rates of return) were reported much less frequently. However, these measures were utilized more frequently in the larger agencies.

Types of Data Sources in Program Evaluation

The prevalence of less sophisticated measures investigating programs is reflected by the types of data used in program evaluation. Data sources can be categorized into three types. The first includes the federally required R-300 reporting form, state forms similar to the R-300, and other routinely collected data. The second includes data made available through other agencies or parties (such as

federal studies). The third category includes data collected in special studies. Routinely collected data was the most frequently used data source.

Uses of Program Evaluation Models

Ridge (1973) reports that 39% of the agencies reported the use of program evaluation in program development. She questions whether this response applies to the total process of: (a) specifying objectives; (b) analyzing a program for its critical elements; (c) projecting how these elements might be adjusted if necessary; and (d) assessing whether a particular program fitted the needs of the target population

Forty-two of the agencies gave examples of program changes due to evaluation performed in their own state, 20 agencies gave examples of changes resulting from federally sponsored evaluations, and seven agencies reported changes stimulated by evaluations done by another state's agencies. Changes due to in-state evaluation included changes in counselor assignments, subdivision of offices, improvements of case reporting, and the establishment of uniform counselor procedures. Changes related to federal evaluations included giving priority to welfare clientele, the elimination of duplicate accounting procedures, and the resetting of standards for case cost and for the number of 26 closures.

## Generalizations About the State-of-the-Art Before 1973

The results reported by Ridge (1973) and Colligan (1973) indicate the following generalization about state agency program evaluation at the time of the study:

1. While many states were developing program evaluation units, in most cases, these units were limited in staff size.
2. Program evaluation staff were most often counselors who had been reassigned. These program evaluators had limited training in program evaluation.
3. There was minimal involvement of state agency staff at various levels in the design of evaluation procedures. While administrators were consulted more frequently than others, involvement prior to dissemination of results was limited.
4. In general, evaluation studies focused on specific programs and were often crises oriented to explain problems after-the-fact. There was little evidence of the ongoing use of program evaluation for comprehensive program development purposes.
5. Case review procedures were most commonly used as an evaluation methodology with case flow analysis and follow-up studies less commonly used. This means that state agency program evaluation activities were yielding limited data related to the impact (outcomes) of rehabilitation programs.

6. Data sources used in program evaluation were limited primarily to R-300 and other readily available data.

## The Arkansas Rehabilitation Research and Training Center Project: The Emerging Response to the Appearance of the Nine Standards

### Overview

The Arkansas Rehabilitation Research and Training Center (Rubin, 1974) initiated a nationally coordinated exploration of program evaluation issues related to the nine standards for rehabilitation issued in 1974. Each of the 10 rehabilitation regions coordinated a study of a particular area related to one of the nine standards. These regional studies relate not only to the individual standards but also to the division of general goals of evaluation, i.e., between program input, program process, and program outcomes. The correlation of the regional studies to the standards is as follows:

1. Program input:
   a. Standard One: to serve the target population equitably.
      Region II Study: Methodologies for the Estimation of the Vocational Rehabiliation Target Population: An Exploratory Analysis.
2. Program process:
   a. Standard Four: to use resources efficiently.

Region IV Study: A Look at the Utilization of Available Resources.

b. Standard Five: to ensure manageable caseloads for counselors.

Region I Study: The Relationship of Rehabilitation Counselor Caseload Size and Service Adequacy, Service Timeliness, and Caseload Balance.

c. Standard Three: to avoid undue delays.

Region VI Study: Assessing Undue Delays in the Vocational Rehabilitation Process.

d. Standard Seven: to provide needed post-employment services.

Region X Study: The Evaluation of Post-Employment Services Provided by Rehabilitation Agencies.

3. Program outcomes:

a. There is no general standard related to the issue of general satisfaction by clients with the rehabilitation service. This was investigated by Region III in their study, Client Perception of the Rehabilitation Program.

b. Standard Nine: to ensure client satisfaction with the written rehabilitation program.

Region VIII Study: Client Satisfaction with the Written Rehabilitation Program and Other Services.

c. Standard Two: to place clients in relevant gainful employment.

Region IX Study: Field Test of Standard Two.

d. Standard Six: to ensure retention of the benefits achieved through rehabilitation.

Region V Study: Guidelines for Conducting Follow-up Studies to Measure the Sustention of Rehabilitation Clients Benefits in State Vocational Rehabilitation Agencies.

e. Standard Eight: to identify why clients are not rehabilitated successfully.

Region VII Study: Why Clients Fail to Achieve Rehabilitation Success.

The Arkansas Rehabilitation Research and Training Center has summarized both the results of their national conferences and the reports of the ten rehabilitation regions in several publications. A summary report (Rubin, 1974) gives not only an integrated summary of the results of the reports but also abstracts of the regional reports themselves.

Program Input Study

Region II evaluators compared three methods suggested for estimating the rehabilitation client population. The first was suggested by Harbridge House, the second by Nagy, and the third by Ridge. An estimate of the target population for the United States for the year 1973 was made using each technique. There were also field studies made using the

Ridge technique estimating the general rehabilitation and blind target populations for New York and New Jersey. The Ridge technique was selected as the optimal procedure.

Program Process Studies

Region IV evaluators attempted to assess the use of resources by documenting the following items: (a) average case service cost per client; (b) average case service cost per service: (c) non-vocational rehabilitation fund expenditures for services; (d) service costs; and (e) service utilization. Region IV evaluators found that many state agencies in that region were unable to produce data on average costs per service. They also noted that existing case data "fails to reflect the amount of time, travel, etc., spent on a case by a counselor." In Florida, the evaluators raised serious doubts concerning the reliability of R-300 data on the number of services provided fully or in part by third party funds and found that case review procedures were hampered by incomplete case records and varying definitions used by different counselors. When data was available, Region IV evaluators found that the average cost per service and the percentage of individuals using each service did vary significantly according to the following factors: (a) disability (severe/nonsevere); (b) type of agency (general/blind); and (c) closure status (26/28/30).

Region I evaluators found little relationship between the size of rehabilitation counselors' caseloads and the

service delivery criteria of service adequacy and timeliness. This conclusion challenges the pervasive opinion that reduced caseload size would automatically generate improved quality of casework. It suggests that the size of a manageable caseload will be influenced by counselor ability and the variety of clients on the caseload (caseload mix). In the process of the study, Region I evaluators felt hampered by incomplete case records.

Region VI evaluators' goal of evaluating the timeliness of service was hampered by a lack of information concerning the relationship between the client's characteristics (caseload mix) and the time spent in the statuses of the caseload by a client. It was concluded that it is difficult to determine the timeliness of service delivery merely by looking at the number of months spent by a client in any one status. Although case review procedures might, therefore, be more appropriate for assessing the timeliness of service to a particular client, Region VI evaluators found that case review would be hampered by case reports either because of insufficient information in the case folder or because of inconsistency in case file format across agencies.

Region X evaluators began their study through a questionnaire sent to both general and blind rehabilitation agencies concerning the frequency of, and methods, and guidelines for post-employment services. Frequency measures sought information not only on the existence or nonexistence of such services, but also on the percentage of status 26

closures receiving such services in the proceeding year. The investigation of methods included a concern about the bases of such services, their sources, and the method of making the initial contact following closure. The returns for this questionnaire suggested that although the great majority of state agencies provided such services, there was much variation in the extensiveness of the activity, there was a general lack of written guidelines for counselors on the provision of such services, and there were few mechanisms for giving counselors credit for doing such work. Region X evaluators concluded that data on post-employment services needs to be collected routinely.

Program Outcome Studies

Region III evaluators investigated the satisfaction of rehabilitation clients in active status (10-24) or in extended evaluation (06) on the following issues: (a) the relationship of client to vocational rehabilitation staff; (b) the adequacy of received information; (c) the program of services; (d) the delivery process; (e) the adequacy of the facilities of vendors; (f) the timeliness of services; and (g) the opportunity for client input. Although the questionnaire used by Region III evaluators provided a seven point Likert scale on each question, the responses from most clients were either completely positive or completely negative. A factor analysis of these reponses indicated that only a general satisfaction category, rather than factors

of satisfaction specific to each of the seven issues, had been tapped. Region III evaluators suggested further investigation of client satisfaction by an organization capable of long-range involvement and/or by the state agency personnel.

Region VIII evaluators investigated whether client satisfaction with the written rehabilitation plan increased client satisfaction with such aspects of agency service as speed of service delivery, medical services, training services, pre-employment related services, participation in planning, agency policies, physical facilities, personal treatment, and the written rehabilitation plan. There were no differences between clients who had participated in the development of the written rehabilitation plan and clients who had not. Between two-thirds and four-fifths of the samples that were surveyed expressed satisfaction with the program aspects listed above. Region VIII recommended further investigation to identify the relationships between client satisfaction and client and agency characteristics, and to develop additional instrumentation to measure client satisfaction.

Region IX evaluators focused on two questions: Are rehabilitation clients placed in gainful activity; and if so, is the activity suitable to their capabilities? Since Region IX evaluators concluded that the first of these questions could be answered through R-300 data, they focused on developing qualitative criteria for evaluating the second

question. They proposed that suitability of employment could be assessed by expert raters on Federal Closure Regulations; by the percentage of clients who were placed in employment for which they were trained; by the percentage of homemakers for whom homemaking was the goal; and by a comparison of earnings for 26 closure clients with persons of similar sex, race, and urban-rural locale who were employed in similar occupations. The chief problem in their study was the inadequacy of information in the sample case files, especially in relation to placement at closure and work history.

Region V evaluators focused on evaluating the retention by clients of benefits achieved from the Vocational Rehabilitation process. A follow-up model was developed for state agencies which specified the general purposes and specific applications of follow-up studies. It was suggested that R-300 data could be used to establish performance expectations for particular client groups but that such groups should be homogenous, similar geographically, and normally distributed on the outcome variables. Research was reported that indicates that telephone surveys are more effective than mail surveys or personal interviews, and that mail surveys are least effective. A list of specific instructions for doing follow-up studies on clients was presented.

Region VII evaluators studied status 28 and 30 closures. It was concluded that the description of "too severely disabled" was usually valid and that nine out of ten of

these clients indicated general satisfaction with the services they had received.

Suggestions from the Regional Group

The first conclusion that is evident from the regional reports of the Arkansas Rehabilitation Research and Training Center's national evaluation studies is that the use of case review as a managerial procedure may be hampered by the inadequacy and inconsistency of the data included in the client's case folder. Regions I, IV, VI and X evaluators identified this issue as a major impediment in their evaluation efforts. Suggestions to improve this situation focused on the development of precise instruction for counselors that would be uniform from state to state thus allowing interstate comparisons to be made.

The issue of comparability of case records is but one part of a second general concern evident in the regional reports. This second issue is the need for uniform data in many areas if national evaluation standards are to be meaningful both in the accumulation of national data and also in the comparisons between programs and states.

The third issue identified by the regional studies is that measures used to evaluate the rehabilitation process reflect caseload mix. A concern with caseload mix also suggests a need to develop alternatives to the use of status 26 (employment) as the only measure of rehabilitation since different types of rehabilitation gains are achieved by

clients which are not accounted for in the present measure.

Finally, the regional studies suggest that care must be taken to identify and incorporate certain information into the data collection system so that it will be available for evaluation. Region X evaluators found this issue to be especially pertinent when evaluating post-employment services. Other areas--such as outreach--may also require such arrangements for appropriate data collection. The data now being collected (e.g., the R-300) might also be reviewed for its usefulness for program evaluation.

## Generalizations About State Agency Program Evaluation Related to the Nine Federal Standards

The nine Federal standards have provided an impetus for state agency program evaluation. The Arkansas Research and Training Center project (Rubin, 1974) involving the 10 Federal regions is helpful in understanding the impact of the standards on program evaluation. The following generalizations can be drawn from that project:

1. The nine standards can be organized as relating to program input, program process, and program outcome evaluation. When this type of organization is used, the standards form a beginning definition of the types of evaluation data which is needed for program development.
2. Using the standards as a focus for evaluation studies, the regional groups developed several new evaluation

methodologies which can be utilized by all states, e.g., methods of estimating client population and conducting follow-up studies.

3. In several of these studies, evaluation techniques were developed such as questionnaires and interview formats. The results of the use of new measures, provide information about their relative effectiveness, e.g., phone interviews are more effective than questionnaires or personal interviews in follow-up studies.
4. Attempts to utilize existing data, e.g., R-300 data, revealed that these data are too often incomplete, inconsistent, and not reported uniformly. This indicates a need to review procedures used in data collection.
5. It was also found that some recently mandated services, e.g., outreach and post-employment services, are not reported because reporting forms have not been modified to relfect these changes.
6. Several of the study groups developed new methods of analyzing and reporting existing data which are useful in providing program evaluation information. These developments can be helpful in stimulating further definition of the evaluation uses of existing data.
7. There is a need to define qualitative outcomes of the rehabilitation process other than employment

and to develop techniques for collecting data related to these outcomes.

8. There is a need to consider client sub-groups when evaluating rehabilitation outcomes. Because of the diversity of the rehabilitation client population, evaluation information should be specific to a particular client group.

## Summary of the Current Status of Program Evaluation in State Agencies

Two major studies have been reviewed in this chapter. The state-of-the-art of the state agency program evaluation prior to 1973 is highlighted by Collignon (1973) and Ridge (1973). The passage of the Rehabilitation Act (1973) and the development of the nine Federal standards provided a major impetus for program evaluation in state agencies. The Arkansas Research and Training Center study (Rubin, 1974) provides an overview of the current status and more importantly suggests new evaluation methodologies and needed developments in the area of state agency program evaluation.

The number of generalizations which are helpful to understanding the status of state agency program evaluation have been presented throughout the chapter. During the early 1970's, state agencies were developing program evaluation units, identifying personnel, and beginning initial program evaluation studies. Major problems were the lack of staff training, lack of a broad conceptualization of

program evaluation to guide evaluation efforts, lack of a diversity of evaluation methodologies particularly related to outcome evaluation, and a tendency to view program evaluation as an activity isolated from agency program development activities.

The Rehabilitation Act (1973) provided a clearer definition of program evaluation as an integral part of program development and resulted in the nine Federal standards as an initial attempt to build the input-process-outcome structure to guide program evaluation design, implementation, and utilization. At present, all states are reporting to the Rehabilitation Services Administration on the nine Federal standards. However, some new problems have been defined as a result of these efforts. These problems include the need to insure internal agency use of the program evaluation information, the need to insure consistency and quality of existing data reported in the R-300 and to develop evaluation-oriented reporting formats for those data, the need to more clearly specify rehabilitation outcomes to provide direction in designing program evaluation, the need to focus program evaluation on specific client groups rather than the total client population, the need to find more effective ways of integrating program development and program evaluation within the agency, and the need to develop and/or identify more appropriate measures for newly identified outcomes.

# CHAPTER III

# APPROACHES TO STATE AGENCY PROGRAM EVALUATION

## Introduction

Chapter II of this monograph explored current practices in state agency program evaluation. This chapter overviews nine approaches which have been developed for use in state agency program evaluation. These approaches were selected for review because they represent comprehensive attempts to provide assistance to state agency program evaluation units. The approaches vary in their scope and intent. They are designed primarily to provide comprehensive definitions of the evaluation process, to organize concepts related to program evaluation into usable models, to develop broad evaluation strategies, and to train program evaluators in specific evaluation techniques. These approaches were selected for presentation because of their comprehensiveness and usefulness in conceptualizing program evaluation.

This chapter provides a thorough description and a critique of each of the following nine approaches:

1. Program Evaluation: A Beginning Statement (Baptista & Moriarty, 1972)
2. Evaluating Vocational Rehabilitation Programs (Hills, et al., 1973)
3. A Model for Program Evaluation in Rehabilitation (Spaniol, 1975)

4. Program Evaluation: A Resource Handbook for Vocational Rehabilitation (Bennett & Weisinger, 1974)
5. Cost Benefit Analysis and Resource Allocation for Rehabilitation Services Project (Collignon, et al.)
6. A Model for Integrating Planning, Programming and Budgeting in a State Vocational Rehabilitation Agency (Towne & Giovannini, 1974)
7. A Practical Approach to Program Evaluation (West Virginia Research and Training Center)
8. Rehabilitation Evaluation: Some Application Guidelines (Bitter & Goodyear, 1974)
9. Program Evaluation Research in State Rehabilitation Agencies (Arkansas Research and Training Center)

Program Evaluation: A Beginning Statement

(Baptista & Moriarty, 1972)

Description of the Approach

Program Evaluation: A Beginning Statement (Baptista & Moriarty, 1972) was developed by the Prime Study Group on Guidelines for Evaluating Vocational Rehabilitation Programs and Services for the Tenth Institute on Rehabilitation Services. This report is a practical guide to acquaint state agency program evaluators with the field of program evaluation. To emphasize the necessity of an rationale for program evaluation, the guide begins by delineating 25 possible reasons for conducting program evaluation and 29 questions which are important and can be answered through program evaluation.

Program evaluation is viewed as an indispensable function of the state rehabilitation agency because it helps the agency: (a) determine agency goals; (b) determine the effectiveness of agency service delivery; (c) better determine vocational rehabilitation program needs; and (d) insure efficiency in program management.

Having indicated the importance of program evaluation, the report describes the nature of program evaluation and discusses the important issues associated with evaluation. Program evaluation is defined as "finding out whether or not things work, and how to make things work better" (p.9). The role of the program evaluator "is to act as a stimulator, as a catalyst, as a change agent in the organization, helping to see that functions (e.g., setting goals and targets, planning, program management, etc.) are carried out in such a way as to improve the effectiveness of the program" (p.9). Program evaluation is viewed as a function of an organization, and therefore, the total organizational staff should assume responsibility for the design, implementation and utilization of program evaluation information.

Program evaluation is described as a step-by-step process which consists of a series of seven activities. "(1) spell out objectives for program being evaluated; (2) select objectives to be evaluated and determine statistical analysis; (3) construct (or select) evaluation instruments; (4) select samples; (5) determine the point at which testing is to take place; (6) conduct statistical analysis; and (7) develop conclusions and recommendations" (p.14).

This report provides specific suggestions for various steps in the evaluation process, and stresses the importance of designing all of these steps prior to the start of the program. Principles to guide the selection of instruments, sampling procedures, and types of statistical analyses are overviewed. Particular emphasis is given to the development of meaningful criteria for program evaluation. The use of multiple criteria is encouraged with the suggestion that criteria can be grouped into three categories including client-community impact, program efficiency and effectiveness, and program management.

The staff composition of the program evaluation unit is seen as a major factor in the success of program evaluation. "The unit charged with program evaluation should be responsible for both program evaluation and program and policy analysis. . . The staff in the program evaluation unit should have professional expertise in several areas such as: state agency operation, evaluation and experimental design, data collection, fiscal and budget activities, statistical analysis, management and economics" (p.27). It is also suggested that the program evaluation unit have some provision for utilization of outside consultants and for consumer participation.

The final chapter of the guide is titled, "Program Evaluation: An Invitation to Innovation." This chapter suggests that commitment to program evaluation is also a commitment to organizational change. Specific factors which both support and inhibit change and stages of the

change process are described. This discussion stresses the importance of total agency commitment to program evaluation and the need for carefully designed strategies to support changes which are indicated by program evaluation data.

Critique of the Approach

This approach is a "beginning statement" but a very important one because it provides a clear statement of the relationship between program evaluation and state agency program development and change. In this sense, it suggests a needed frame of reference to guide the design, implementation, and utilization of program evaluation in state agencies. The most critical factor suggested in the success of program evaluation is the commitment and involvement of agency staff at all levels. This is viewed as a condition which needs to be initiated and continually supported by the use of carefully designed strategies. Although this approach does not provide a broad, theoretical conceptualization of evaluation methodologies, purposes, and techniques, it does provide an important beginning statement of necessary organizational conditions which are vital to the success of program evaluation.

Evaluating Vocational Rehabilitation Programs

(Hills, et al., 1973)

Description of the Approach

This approach stresses the importance of developing a

comprehensive definition of program evaluation which considers not only outcomes but such important program aspects as program production, management practices, and community relations. Program evaluation is viewed as measuring the extent to which broad agency goals related to the total organization have been achieved. The author (Hills, et al., 1973) suggests that evaluation research "can increase the knowledge of supervisors and counselors about their program, send feedback to the staff during the evaluation, and, if conducted properly, the data gathering can be a learning experience for the staff" (p.21). However, owing to budget limitations and administrative needs, the scientific rigor applied to research needs to be modified for program evaluation.

The report reviews a number of research and evaluation models in light of their appropriateness for state agency program evaluation. It is suggested that operational research approaches have the weakness of examining whether agency rules have been followed but neglecting to provide information about the achievement of major organizational goals. The effectiveness evaluation approach is described and is judged more promising for agency program evaluation because it views the organizational system in its entirety and seeks to determine how well the total agency task has been accomplished as well as providing information about the effectiveness with which the task has been achieved. The authors further suggest that the goal model and the systems model can be helpful in designing program evaluation. The goal model stresses the

need for a clear, comprehensive statement of agency objectives while the systems model stresses the need to identify major agency components and to consider the interaction of these in program evaluation.

The last chapter presents a practical kit for measuring effectiveness. Three major areas of evaluation (production, management practices, and community relations) are discussed in relation to the criteria found by state directors to distinguish more effective district offices from less effective offices. Productivity evaluation is divided into four aspects: (a) extensiveness of rehabilitation production, (b) the overall volume of output, (c) the techniques of caseload management, and (d) the relationship of the supply-demand and agency services. All four are described and criteria for each are presented. Efficiency questions are mainly related to cost-benefit analysis. A discussion of rehabilitation costs and benefits focuses on the importance of measuring program impact (benefits) related to intangible, quality goals such as improving the quality of life and increasing client satisfaction. Other suggested effectiveness considerations are the agency's ability to reach its goals, the quality of caseloads, the quantity of caseloads, and the potential for improvement.

Management practices are defined as the planning, coordinating, directing, and controlling of organizational activities. The authors suggest that "good management practices involve the consistent use of evaluative measurements to inspect for weakness as well as to indicate direction for potential

improvements" (p. 42). Both standardized instruments and informal measures are proposed as helpful for anlyzing formal and informal managerial influences.

The effectiveness of the agency's relationship with the community is defined as measuring the external impact of the program. Using empirical findings, the authors list three specific criteria that indicate the impact of a program on the community including community attitudes, client complaints, and counselor involvement in the community.

The major theme of this approach is that state rehabilitation agencies are complex organizations. Although an agency should possess defined structures for achieving its goal (production), the leadership provided by the managers and administrators in promoting cooperation and mutual respect internally (management practices) and externally (community relations) is vital in determining the effectiveness of the organization. For this reason, evaluation of the production of the agency must be combined with evaluation of management practices and community relations if evaluation is to provide information which stimulates improvement and change in rehabilitation programs.

Critique of the Approach

This approach presents a broad framework for the design of state agency program evaluation. It suggests that agencies are complex organizations and, therefore, program evaluation should not only consider agency production but

should provide information about the relationship of agency leadership, system components, and public attitudes toward the agency to the achievement of specified agency objectives. This provides a broader definition of program evaluation and suggests the need to examine multiple variables rather than the specific, direct relationship between treatment and outcome which is characteristic of research. The approach is helpful because it recognizes the complexity of program evaluation. Further development of the approach might focus on the developing procedures which can help program evaluators describe the goals and structure of their own agency and design evaluation procedures which address all aspects of the complex organization.

## A Model for Program Evaluation in Rehabilitation (Spaniol, 1975)

### Description of the Approach

Spaniol (1975a, 1975b) has developed a comprehensive program evaluation model based on components identified through a review of 16 existing program evaluation models. He suggests that "the model presented here is not intended to be inclusive. It is to provide a broader conceptual framework than currently is available for understanding program evaluation" (1975b, p.1). He further indicates "the model presented is also a guide for program evaluators. An adequate model can assist evaluators in identifying the

major components of a comprehensive evaluation system and in selecting an appropriate aspect of their own effort" (1975b, p.1).

Spaniol (1975b) suggests that "program evaluation is a systematic, continuous process of providing information about the value or worthwhileness of a program for the purpose of decision-making" (p.2). He further indicates that "it (program evaluation) must be practical and concretely assist policy analysis and general decision concerns. . . . The evaluator needs to be convinced of this and of the critical role he/she can have in the development of the program" (p.3).

This model for program evaluation suggests three basic concepts which can be used to guide to design of program evaluation. These are context, purpose, and methodology. The context of program evaluation includes "the circumstances or environment in which evaluation occurs. This includes the mission statement, goals, and objectives of the program" (1975b, p.3). The purpose of program evaluation must be specified prior to the design of specific evaluation procedures. The model identifies four major purposes for conducting program evaluation: (a) program justification, (b) planning and policy analysis, (c) organizational development, and (d) innovation change.

Of the three key components of the model, methodology is described in greatest detail. The components of program evaluation methodology are presented and each is

described. Methodology is basically viewed as the way in which evaluation proceeds. The components of methodology are: the type of evaluation, the type of variables, the type of criterion, the tools and measures, and the feedback to the decision structure for implementation. Each of these components of methodology is described thoroughly at the conceptual level. The model also provides flow charts and figures which attempt to suggest steps in the evaluation design process and to relate context, purpose and methology concepts to each other.

Spaniol acknowledges that his model is highly conceptual and provides the caution. "The question of how the model can fit into an organizational structure needs to be further illustrated. More specific suggestions and guidelines for establishing an evaluation function in an agency, program, or project, based on the model, need to be written. This is certainly a task for subsequent study" (1975b, p.19).

Critique of the Approach

This approach is based on a comprehensive review of 16 existing program evaluation models. The definition of program evaluation as "a systematic, continuous process of providing information about the value or worthwhileness of a program for the purposes of decision-making" (1975b, p.2) is helpful in that it suggests the important relationship between program evaluation and program development. It

also suggests that the program evaluator is an integral member of the agency who helps design the collection and use of data at strategic points throughout the program development process. The context-purpose-methodology model provides a framework for organizing program evaluation components derived from other models. It provides a first step in helping program evaluators design evaluation based on a broad comprehensive. This is both an advantage and a disadvantage. Before it can be utilized by program evaluators, it will be important to more clearly define the relationship between elements of the model, and the model will need to be translated into specific evaluation design steps.

## Program Evaluation: A Resource Handbook for Vocational Rehabilitation

(Bennett and Weisinger, 1974)

### Description of the Approach

Bennett and Weisinger (1974) view evaluation as "a systematic and objective method of looking at where a program presently stands and estimating how a program can do better" (p.2). They suggest that "the final outcome of any evaluation process is change" (p.2) or, stating this concept somewhat differently, "the purpose of program evaluation is to: determine which are the best programs and why; suggest ways to strengthen existing programs; suggest new ways to solve problems" (p.15). Drawing from

this statement of purpose, they conclude that "the most powerful evaluations are those in which both the entire program and program components are examined" (p.15).

This approach is based on a comprehensive review of the rehabilitation program evaluation literature. An analysis of the literature suggested three fundamental dimensions of the program evaluation process: the first dimension is the type of measurement or analysis (i.e., input analysis, process evaluation, and outcome evaluation); the second dimension is the level of program responsibility (i.e., total program, program management, and service delivery); and the third is the type of technique and methodology (i.e., research approaches and systems approaches.) They relate techniques and methodologies of evaluation to type of measurement or analysis by indicating that it is helpful to classify evaluation techniques and methodologies according to their usefulness in input, process, or outcome evaluation. Five classes of measure are identified including; effort (i.e., staff time, use of various resources, etc.); impact (i.e., a broad social change brought about by the program); effectiveness (i.e., client outcomes or changes); efficiency (i.e., economics of the program operations); and quality (i.e., goodness of the program). They question the utility of impact measures indicating that impact is, in a broad sense, the same as effectiveness and that where the two are different, "the impact criteria are very difficult to establish and data very costly to collect" (p.8).

Bennett and Weisinger suggest a two-dimensional model for rehabilitation program evaluation. This model includes program level (total program, program management, and service delivery) and type of measure (effort, effectiveness, efficiency, and quality). This model proposes that any program level can be evaluated using any type of measure. Program evaluation designs which utilize multiple types of measures will provide more comprehensive information to guide the program development process.

Along with the proposed model, Bennett and Weisinger also present a discussion of program evaluation design which can be used in applying their model to practical situations. The design is divided into five component steps including: (a) a statement of the program evaluation objective which emphasizes operationalization of important variables under study; (b) specification of methodology which highlights the research approach, i.e. systems approach, issues associated with reliability, bias and validity, and sampling problems; (c) collection of data which specifies five sources of data such as existing records and statistics, interviews with clients and the public, rating by professionals, other special data collection procedures, and experience of other governments; (d) analysis of data which emphasizes knowledge of both decriptive and inferential statistics and various techniques of systems approach; and (e) interpretation of the data and conclusions.

Having developed this framework for conceptualizing the design of program evaluation, Bennett and Weisinger present a "Compendium of Measures: and "Examples of Program Evaluations." The Compendium organizes and describes 146 measures identified through the literature review using the two-dimensional model. The examples present abstracts of 16 program evaluation studies grouped according to type of study (plans, research approach, systems approach, cost benefit analysis, and other field examples).

Critique of the Approach

The approach provides major assistance to program evaluators both by suggesting a conceptual scheme and by describing specific measures which can be used in designing program evaluation efforts. The organization of existing measures in a usable format responds to a program evaluation need and should be updated as new measures are developed. The "Handbook" highlights the importance of reviewing and organizing the current knowledge base related to rehabilitation program evaluation. While the conceptual scheme developed by the authors is a useful one, other dimensions might be added to help relate program evaluation measures to the program development process. Specifically, although type of analysis (input analysis, process evaluation and outcome evaluation) are mentioned, measures in the Compedium are not clearly related to these types of analysis. If they were, program evaluators could more

easily identify which measures are most appropriately used at various steps in the program development process.

## Cost-Benefit Analysis and Resource Allocation for Rehabilitation Services

(Collignon, Zawada, Thompson, & Markowitz, 1972)

### Description of the Approach

The report of the Prime Study Group on Program Evaluation (Collignon, Zawada, Thompson, & Markowitz, 1972) describes not only the procedure for program evaluation but also the important issues and variables involved in program evaluation. Program evaluation is seen as a series of activities progressing from "audience analysis" through "contingency analysis" to "establishing criteria." According to the authors, the "audience analysis" is important because "the type of evaluation and criteria related might also vary at the different levels where evaluation might take place" (p.3). It is, therefore, "the responsibility of the evaluator to determine precisely whom he is to serve, and what type of evaluation might apply to that level in the hierarchy" (p.3). Closely associated with audience anlysis is contingency analysis. Contingency analysis is viewed as a second important step in the program evaluation because "decisions about what should be evaluated are also influenced by anticipations about the likely outcomes of the evaluation" (p.5). Contingency analysis specifies the types of program development decisions which will be

made with the program evaluation data. Four types of possible program decisions are suggested: (a) expansion of the program; (b) termination of the program; (c) continuation of the program; and (d) revision of the program.

Once audience analysis and contingency analysis are completed, it is then appropriate to undertake the process of the evaluation is "to understand how well a program or a set of programs is operating" (p.7). The process of evaluating consists of various activities such as (a) understanding of characteristics of the existing program (e.g., program input, nature of intervention, the conditions under which services are delivered, the original state of client, program output, etc.); (b) determining the effectiveness of the program; (c) explaining the positive and negative aspects of the outcomes and other unanticipated consequences; and (c) deciding on the possible actions which need to be taken as a result of evaluation.

When thorough understanding of the program is achieved through the "process of evaluating," the evaluator then needs to make some type of judgment as to the goodness of the program. In order to make these judgments one needs "guidelines, standards and measures of success" which are generally called criteria (p.13). In establishing criteria, "the evaluator must be aware of what is to be measured, what measurements are or might be available, and how strong the relationship is between the two" (p.13). In order to know what to measure, one needs various information such as:

(a) the content of the objectives (whether it is to change knowledge, attitude, or behavior, etc.); (b) the target population of the program (whether it is individuals, groups, or community as a whole) (c) the type of change (whether it is short-term or long-term); (d) nature of objectives (whether it is unitary or multiple); (e) the desired magnitude of effect, and (f) means to accomplish ends (or objectives) p.14). The purpose of program evaluation should guide the development of criteria. Such purposes as understanding of client and community impact, program efficiency and effectiveness, or program management would suggest differing criteria.

Important issues involved in various activities and aspects of program evaluation are described. The issues reviewed are: (a) problems associated with program management such as problems centered around the production vs. adequacy of the program (or service), quality of professional and administrative staff, utilization of community resources, funding, rehabilitation strategies, and inadequacies of standards; (b) problems associated with program effectiveness such as experimental approach vs. practice oriented approach, subjective judgment of the experts vs. objective measures; (c) problems associated with lower level program efficiency such as validity of the service, suitability of the service, and clients; needs; (d) problems associated with client and community impact such as coverage, subpopulations, consumer satisfaction, client work stability,

and follow-up studies, etc.; and (e) problems associated with higher-order efficiency such as program budgeting and cost/benefit analysis.

In another report, Collignon (1973), presents his evaluation model entitled Functional Model of the Evaluation Process Within Organizations. He first describes current program evaluation practices in the rehabilitation field and makes some observations about possible future directions of program evaluation. Specific needs include: (a) need for a national or statewide coordinating agency which facilitates the interaction between agencies, (b) need for development of basic evaluation methodology, (c) need for development of new indicators to supplement the 26 closures, (d) need for inservice training of the evaluators, (e) need for development of new approaches to evaluation utilizing the qualitative data and the judgment of counselors as well as of clients, (f) need for more research on policy and program operations, and (g) need for a systematic and continuous review of major evaluation research.

His model was developed in response to these needs. The Functional Model suggests six functions of program evaluation: (a) description of the program; (b) understanding of the program; (c) judgment of the program; (d) formulating recommendations for change; (e) selling recommendations to the decision-makers, and (f) implementation of the recommendations. These six functions are essential components

of program evaluation and are sequential in nature. Among the six functions, judgment of the program is considered as "one of the core functions of evaluation" (p.29) because recommendations for change cannot be made without judgment of the program. Judgments about the program will ultimately require the integration of different types of evaluation information. It is suggested that "agencies need to integrate measures of client impact with data on cost and program performance to assess the overall program worth. Such an assessment is necessary if the agency is to compare the relative impact of different kinds of program stategies and decisions in relation to the costs necessary to implement the strategies" (Collignon, et al., 1972, p.55).

The Functional Model of the Evaluation Process within Organizations was developed in conjunction with the Project for Research on Cost-Benefit Analysis and Resource Allocation for Rehabilitation Services Programs conducted by the Institute of Urban and Regional Development at the University of California, Berkeley. This project focused on the use of cost-benefit analysis as an evaluation technique which allows judgments about a programs worth to be made based on data which integrate measures of program impact with measures of program effect, effort, and costs. A series of reports from the project develop a cost-benefit analysis model for vocational rehabilitation and report applications of the model (Averous, Stahl, & Cole, 1971; Dobson & Cole, 1972; Armstrong, 1972).

Critique of the Approach

As a basis for the development of the cost-benefit model for rehabilitation program, Collignon working with others developed a broad conceptualization of program evaluation in state rehabilitation agencies based on interaction with the Prime Study Group of the Tenth Institute on Rehabilitation Services and on a survey of current state agency program evaluation practices. Based on this work, three major contributions to program evaluation were made. First, data about the current status of program evaluation in state agencies were analyzed which suggest needed developments related to program evaluation. Secondly, the Functional Model was developed which provides a description of six functional steps which comprise the program evaluation process. These broad functions focus on the total program development process and stress the importance of utilizing evaluation data in decision-making. Finally, the development of a cost-benefit model stresses the importance of integrating input-process-outcome data when making major program decisions. Although the conceptualization of the Functional Model and the information on the current status of stage agency program evaluation is broad, the primary use of these important developments within the project was to build a rationale for the need for a cost-benefit model. This, of course, was most appropriate within the context of the project. However, these efforts are important enough to warrant further development. For example,

continuing information about the status of evaluation in state agencies is needed, the Functional Model could be further developed by suggesting procedures and principles to guide each of the six functions, and evaluation techniques other than cost-benefit analysis could be developed for application in state agencies.

## A Model for Integrating Planning, Programming and Budgeting in a State Vocational Rehabilitation Agency

(Towne & Giovannini, 1974)

### Description of the Approach

In their report, Towne and Giovannini (1974) indicate that the administrative staff of the Wisconsin Rehabilitation Agency recognized the strength and power of the modern management techniques such as PPBS (Planning, Programming, Budgeting System) and MBO (Management By Objectives). Furthermore, "the staff felt the integration of planning, budgeting and evaluation functions would be equally desirable for a state rehabilitation agency" (p.2). As a result, the staff of the Wisconsin Rehabilitation Agency undertook the task of developing a model of "an integrated planning, bugeting and evaluation system for state rehabilitation agencies" (p.2). The major emphasis of the model is placed on "both a modern staffing pattern and a system for bringing together all the activities in the areas of long range program planning, budget request planning, program evaluation, operational

planning, and policy analysis" (p.2). The model, Program and Performance Evaluation System is designed to integrate "the functions of planning, programming and budgeting" (p.3).

The Program and Performance Evaluation System is a systematic, integrated approach designed to incorporate six main functions and efforts into the ongoing operation of the agency. These are:

1. Identification of program elements. (What is being done for whom?)
2. Identification of specific agency objectives in terms of program elements. (The agency will define its role and intent for target group of clients in relationship to other agencies which serve the same target group.)
3. Identification of criteria for decision making and program review using performance indicators.
4. Setting a point of reference for evaluation which involves the identification of objectives and determination of what will be accomplished in terms of performance indicators by specific target dates.
5. Reporting actual agency performance.
6. Establishment of a feedback system so that information will be utilized in the continuous process of reevaluating and redefining objectives (p.9).

The first three of these objectives are generally determined by "the thinking of top management within the agency" (p.9), and the last three are carried out with

"participation of all levels of management" (p.10). In other words, "all supervisors in the central office and in the field establish performance objectives in their respective areas of program responsibility which are incorporated into the ongoing system extensiveness (the level of agency effort and accomplishment), effectiveness (the relationship of productivity to intent and the relationship of intent to need), efficiency (cost to man hours related to activity, production, and intent), and program impact (economic effect, benefit, etc.) (p.10-11). When all the details are worked out and the six functions are systematically incorporated into the existing system, the implementation of the Program and Performance Evaluation System model is virtually completed.

As an immediate effect of the development of the model, the managerial functions of the Wisconsin State Rehabilitation Agency were improved to the extent that the staff was able to carry out effective program development, efficient program operations, and systematic program review. Furthermore, these overall improved functions helped to achieve an effective and efficient program structure, the establishment of clear and meaningful Department of Vocational Rehabilitation agency objectives, and the establishment of useful Department of Vocational Rehabilitation agency performance indicators (p.11-12).

Critique of the Approach

This approach was developed within the Wisconsin Department of Vocational Rehabilitation. It, therefore, reflects the need of state agencies for a systematic program planning and development approach which includes the ongoing collection and analysis of data for use in decision-making at all levels of the agency. The approach details procedures which can be used to develop program objectives including performance indicators which specify the design of evaluation related to the objectives. The approach stresses the importance of specifying program objectives prior to developing an evaluation design. As a description of a process which integrates program evaluation with program planning, the approach is helpful to other state agencies. There is little discussion of specific measures or evaluation techniques. Therefore, use of this approach might well be supplemented with more detailed program evaluation guides.

A Practical Approach to Program Evaluation

(West Virginia Research and Training Center)

Description of the Approach

The West Virginia Research and Training Center's (RTC) approach to rehabilitation program evaluation is practical rather than theoretical. In response to the Federal mandate for program evaluation, the West Virginia RTC has developed several publications which help state agency

program evaluators conduct evaluation using existing data. Most of the Center's publications (Greever & Leary, 1972; Moriarty, 1976; Moriarty et al., 1974) are designed to help program evaluators learn how to use statistical methods by which existing R-300 data can be transformed into meaningful evaluation information.

Basically, three major statistical methods are proposed: (a) descriptive statistics, such as standard deviation, range, average, percentage; (b) Profile Analysis Technique (PAT), which transfers raw data into a standardized stannine scale; and (c) inferential statistics, such as chi square, correlation, analysis of variance, and multiple linear regression.

By explaining very basic statistical concepts, the West Virginia RTC intends to help program evaluators, who have little or no previous experience, learn how to manipulate data to gain meaningful information from routinely collected data. Greever and Leary's (1972) study guide, Program Evaluation: A Beginning Statement (1972) is one example. The authors demonstrate how relatively simple work with averages and percentages using available data in the R-300 form can provide information for program improvement. Part of the Moriarty's Guide to Vocational Rehabilitation Program Evaluation (1976) is devoted to concepts of range and standard deviation which are essential to understanding the performance level stated in the nine Federal program evaluation standards.

Profile Analysis Techniques (PAT) was developed to meet

five suggested evaluation technique criteria: ease of interpretation, orientation toward rehabilitation, flexibility, simplicity in computation, and permitting multiple criteria analysis (Moriarty, Undated). Basically, PAT is a technique of plotting standardized program factors on a profile in order to facilitate comparison within an agency or among agencies. Stanines are used as a standard score with scores ranging from 1 to 9 with an average of 5 and a standard deviation of 2. By converting program variables (such as number in caseload per counselor, number of rehabilitants per 100,000 disabled, or cost per rehabilitant) into stanines, performance on variables can be compared to state and national norms.

Walls and Tseng (1974) view the vocational rehabilitation process from an input (intake), intervention (process), and output (outcome) model. Using this framework, they suggest that program evaluation should specify outcomes and then identify indicators from process and input variables which can predict these outcomes. An examination of outcome criteria currently being used by state agencies resulted in the conclusion that too often the single criterion of productive employment is being used. Walls and Tseng (1974) then review the literature to suggest input and process variables which have been found to be related to the successful employment outcome criterion. In addition to existing 26-closure criteria, other outcome dimensions such as psychosocial functioning, physical functioning, economic

independence, and vocational functioning and potential are suggested.

Critique of the Approach

The West Virginia RTC has developed a series of publications which effectively respond to the current status of state agency program evaluator expertise and to the range of existing program data. While most of the approaches described in this chapter provide a theoretical orientation to program evaluation, the West Virginia approach is directly targeted to increasing the existing skills of program evaluators. This is a real strength since these materials have immediate application and do not require major translation prior to application in state agency program evaluation efforts. It might be cautioned that this approach should be used in combination with other approaches which suggest broad conceptual frameworks in organizing and designing program evaluation, and which begin to suggest evaluation measures which extend beyond the resources of the R-300.

Rehabilitation Evaluation: Some Application Guidelines
(Bitter & Goodyear, 1974)

Description of the Approach

Bitter and Goodyear (1974) have developed a "how-to-do-it" manual and workbook; thus extending the purpose of other documents which describe the nature of program evaluation" (p.1). This manual was developed as a response to the

need to fill the gap between theoretical knowledge about program evaluation and practical application of the knowledge to real problems. The target audience of the manual is "rehabilitation practioners responsible for, or interested in, program evaluation" (p.1). It is, therefore, primarily for the practioner who is actually to conduct program evaluation.

The goal of the manual is to provide seven concrete application examples of sample evaluation objectives. Each of the seven examples provides the following information: "(1) sample evaluation objective for a rehabilitation program component; (3) methodology for evaluation, including the general procedure, measurement approach and statistical procedures; and (4) interpretation of the results for service delivery practices" (p.1).

The suggested methodology for evaluation consists of three major components: (1) evaluation study design; (2) selection (or construction) of measurement devices (or tools) such as questionnaire, interview schedule, inventory, etc.; and (3) selection of appropriate statistical procedures for analysis of the data. The study designs are basically four types: Ex Post Facto design, One Group Pretest-Posttest design, Pretest-Posttest Control Group design, and Solomon Four-Group design. The statistical procedures described include: Chi-square text for both one sample and two independent samples, t-test for both correlated samples and two independent samples, Pearson

product-moment correlation, simple analysis of variance, and 2x2 factorial analysis of variance.

A brief introduction to the manual includes definitions of program evaluation, various definitions of the evaluation process, the authors' views on evaluation principles, and a brief description of sampling techniques. Having set this framework, the manual then provides detailed information on the seven program evaluation examples. Each of the examples is presented in thorough detail thus providing an instructional manual for program evaluators. The seven examples address the following program objectives:

1. To determine client satisfaction with rehabilitation services for cases closed during three fiscal years.
2. To determine differences for male and female clients in services provided or arranged for by the agency during the rehabilitation process.
3. To determine the relationship among some client service variables (ages, number of counselor contacts, months of employment, and weekly income) for clients closed as rehabilitated (Status 26) for one fiscal year.
4. To compare delivery effectiveness of rehabilitation counselor performance in three rehabilitation offices based on the number and case difficulty of successful closures.
5. To compare the effectiveness of different service

delivery techniques with a particular type of client.

6. To compare the effectiveness of two different methods of orientation to rehabilitation services for new clients.
7. To determine the effectiveness of in-service training on counselors' knowledge of placement methods and resources.

Critique of the Approach

This approach helps remove the barriers between theory and practice in the field of rehabilitation program evaluation. The presentation of the methodologies and procedures are so specific and clear that they should increase not only the practioners' understanding of the specific methods and procedures presented, but also their skills in identifying and evaluating their own program objectives. The format used to present the examples is highly systematic, well organized, and instructional. This manual is based on the evaluation research model which treats evaluation objectives as research questions which can be addressed through the use of specific research designs and statistical analyses. This model can provide helpful information related to outcomes. It may not, however, be sufficient to provide the comprehensive information about program inputs and procedures needed for program planning. If used in isolation from other evaluation data, this approach may provide insufficient

data for program development.

## Program Evaluation Research in State Rehabilitation Agencies

(Arkansas Research and Training Center)

### Description of Approach

The Arkansas Research and Training Center (RTC) has focused much of its activity on the application of evaluation research to state agency program evaluation. As Greenwood (1974) indicates, "the era of reliance upon input measures of effectiveness and gross, cummulative output measures (rehabilitation closures) is bygone" (p.20). Evaluation research can provide data for decision-making related to program or sub-program termination, selective utilization, modification, or expansion (Rubin, 1974, p.1). It is suggested that confidence in evaluation research findings can be increased if evaluation follows the rules governing basic research, e.g., utilizing reliable and valid measures of program activity and effect, and requiring a theoretical foundation to answer "why" question.

Rubin (1974) proposes three basic models to evaluative research which can be applied to state agency program evaluation:

Model 1 - Measures the effect of an entire program;

Model 2 - Compares the effect of specific variables within a program;

Model 3 - Measures the differential effects of specific variables within a program (p.2).

Model 3 is proposed as the most powerful program evaluation model because of the diversity of rehabilitation clients and the range of rehabilitation services. Rubin suggests that "Model 3 effectively and comprehensively implemented could throw light on the differential effectiveness of service programs for rehabilitating client types with different needs" (p.3).

Rubin (1974) further suggests that use of Model 3 in evaluation research can result in six possible outcomes which provide important information for program decision-making. These are: (1) no significant difference; (2) treatment main effect; (3) client main effect; (4) treatment and client main effect; (5) ordinal interaction effect; and (6) disordinal interaction effect (p.5). The approach recognizes the importance of agency cooperation in evaluation research, and suggests that there may well be resistance because of fear of the results of evaluative research. This resistance can be reduced by early involvement of agency staff in the design of evaluation research.

Bolton (1974) provides further elaboration of the variables involved in evaluation research in rehabilitation. He suggests three classes of variables including "client variables (attributes and characteristics), treatment variables (counselor interpersonal skills, counseling techniques, and other services), and outcome variables (measured change on psychological characteristics and global indices of success)" (p.15). He recognizes that the rehabilitation

process is complex but argues that identification of specific variables is an essential first step. Although interaction of multiple variables can lead to analyses which define composite descriptions of client, treatment, and outcome dimensions.

Greenwood (1974) further extends the range of variable related to rehabilitation program evaluation to include factors external to the rehabilitation process. He indicates that "efforts to predict rehabilitation outcomes using client characteristics have resulted in findings which could account for only a portion of the variability contributing to outcome" (p.21). He suggests that external factors such as economic conditions, institutional barriers and societal attitudes may also have an impact on client outcomes.

Bozarth (1974) summarizes the need for the use of evaluation research in state agency program evaluation by suggesting that "basic research must be included in the evaluation of programs. It is the long-term cross-validation and replication which is the crux of advances in rehabilitation programs . . ." (p.41). He further suggests that the use of basic research in program evaluation will be facilitated by rephrasing program evaluation questions into research questions which can be measured and by stressing a helping, experimental stance rather than a judgmental stance in evaluation.

## Critique of the Approach

The Arkansas Research and Training Center has responded to the need to use evaluation research to gain a clearer understanding of the impact of client and treatment variables on rehabilitation outcomes. This is a response to other evaluation models which look only at inputs and processes and which stress the use of evaluation data primarily for program justification rather than program improvement. The work of this RTC has provided a major contribution by specifying variables related to the rehabilitation process and suggesting methods of measuring these variables. This approach may well need to be combined with other evaluation models since, while it provides important insights into effectiveness of programs, it provides limited information on the efficiency of programs. Also, evaluation research requires time to build a knowledge base relative to the rehabilitation process. While this is crucial to the long-term improvement of rehabilitation programs, other models are needed to provide the short-term information needed for ongoing program decision-making.

## Summary of the Program Evaluation Approaches

This chapter has reviewed nine program evaluation approaches. The review indicates that there has been considerable development in the area of state agency program evaluation during the 1970's. Although the approaches are

quite diverse and attempt to accomplish different goals, some major trends can be identified. The following areas have been developed and can provide assistance to state agency program evaluation units as they design and implement program evaluation activities.

## Evaluation Design Components

Several of the approaches (Spaniol, 1975a; Bennett & Weisinger, 1974; Collignon et al., 1972) specify key components which should be considered when designing program evaluation. The first consideration is purpose. Evaluation results can be used for such purposes as program justification, planning and policy analysis, organizational development, and innovation and change (Collignon et al., 1972). Specifying the purpose or purposes of evaluation provides direction for selecting elements of the evaluation design.

A second component is level of program evaluation. A program evaluation design may address the total state agency program, program management, or service delivery (Bennett & Weisinger, 1974). When designing evaluation studies, it is important to specify which level of state agency program is to be evaluated. A third component is type of evaluation. As was mentioned earlier in this monograph, program evaluation provides information needed at various stages of the program development progress. Three basic types of program evaluation are input, process and outcome evaluation. Each

of these types is appropriate at various program development stages. Specifying the design and sequencing of each of these three types of evaluation is an important design consideration.

A fourth component is evaluation criteria. Evaluation is conducted to make judgments about programs which can be used in making program decisions (Collignon et al., 1972). Therefore, it is essential to describe the criteria which will be used for judgments about programs and to use these criteria to guide the evaluation design process. Several of the approaches suggest categories of criteria (Spaniol, 1975; Collignon et al., 1972; Bennett & Weisinger, 1974; Hills, et al., 1973). There is considerable diversity of terminology used to describe criteria. However, it appears that criteria include the broad categories of extensiveness (number of clients served), effort (amount and type of services provided), effectiveness (extent to which outcomes are achieved), quality/impact (specific benefits to client and to larger society), and efficiency (relationship of benefits to effort and costs). Several approaches suggest that program evaluation has focused more on inputs, costs and services, and that there is a need to design evaluation activities which describe the interaction between program outcomes and benefits and program inputs, services, and costs.

The fifth and sixth components of evaluation design are methodologies and measures. Several of the approaches either describe specific methodologies/measures or inventory a

number of existing methodologies/measures (Hills, et al., 1973; Bennett & Weisinger, 1974; Collignon, 1973; Walls & Tseng, 1974; Moriarty, 1976; Bitter & Goodyear, 1974; Rubin, 1974). It is important to note that most approaches stress the importance of specifying the purpose, level, type and criteria of evaluation prior to the selection of methodologies and measures

Evaluation Design Process

Another dimension of program evaluation, in addition to design components, which is suggested by several of the approaches is the evaluation process. This process involves several stages or functions (Bennett & Weisinger, 1974: Collignon, et al., 1972; Towne & Giovannini, 1974; Baptista & Moriarty, 1972). In Program Evaluation: A Beginning Statement, Baptista & Moriarty (1972) describe a seven step evaluation process including: (1) spell out objectives, (2) select objectives to be evaluated and determine statistical analyses, (3) construct or select instruments, (4) select samples, (5) determine the point at which testing is to take place, (6) conduct statistical analyses, and (7) develop conclusions and recommendations. Collignon, et al. (1972) presents a somewhat broader description of the evaluation process in the six-step Functional Model which includes: (1) description of the program, (2) understanding the program, (3) judgment of the program, (4) formulating recommendations for change, (5) selling recommendations to

decision-makers, and (6) implementation of the recommendations for change.

Understanding the process of evaluation is helpful because each stage of the process suggests the need for developing specific strategies. When the entire process is considered, evaluation becomes more than the design and collection of data. Evaluation becomes an integral part of state agency program development and change. This process suggests that the program evaluator is involved with other agency staff in the process of setting program objectives and designing rehabilitation programs, and that he/she is also a change agent who recommends and gains support for program changes. Program evaluator skills in defining and developing programs and in supporting program change have equal importance with evaluator skills in evaluation methodology.

Multiple Influences on Rehabilitation Outcomes

Another emphasis stressed in several of the apporaches is the need to develop evaluation designs which consider the influences of multiple variables on rehabilitation outcomes. Early conceptualizations of program evaluation focused on the relationship between outcomes and client and treatment variables. Several of the approaches stress the importance of viewing rehabilitation outcomes in relationship to many variables related not only to direct treatment but also to the total state agency as a complex organization (management

styles, communication patterns, etc.) and to the broader socio-economic context (legislation, labor market, social attitudes, etc.). Hills, et al. (1973) have suggested the need to study the impact of management practices and community relations on rehabilitation outcomes. Greenwood (1974) defines external socio-economic factors such as economic conditions, institutional barriers, and social attitudes. Several approaches (Bennett & Weisinger, 1974; Hills, et al., 1973) have encouraged use of the systems model by program evaluators to identify components and relationships of components within the state agency. Use of systems analysis can help program evaluators design evaluation studies which clarify the complex interaction of multiple variables on rehabilitation outcomes.

Use of Multiple Outcomes

A continuing emphasis running through several of the approaches is the need to better describe the multiple outcomes of the rehabilitation process. Walls and Tseng (1974) explored outcome criteria currently being considered in state agency evaluation studies and found that, too often, the single criterion of productive employment is being used. They further suggest that specific outcomes in broad areas such as psychosocial functioning, physical functioning, economic independence and vocational functioning and potential should be developed. It is interesting to note that none of the approaches provided a detailed description of the

rehabilitation process with intermediary objectives in such areas as counseling, restoration, and training which would help evaluators monitor programs prior to final outcomes. Although the use of multiple outcomes in program evaluation is stressed, it appears that major developmental work is needed in this area before state agency program evaluators can strengthen evaluation efforts in this respect.

Expansion of Data Bases

A review of these approaches suggests a need to expand the data bases used in state agency program evaluation. The West Virginia Research and Training Center has focused many of its publications on techniques of using existing R-300 data for program evaluation. Bitter and Goodyear (1974) provide a manual to train program evaluators in the development of evaluation objectives and the design of data collection and analysis. It appears that too often program evaluation designs have been limited to the types of questions which can be answered with existing data. The importance of analyzing design components and following a systematic process in designing program evaluation indicates a need for state agency evaluators to be open to the development and use of expanded data bases in program evaluation. This need is difficult to respond to because of limited time and resources. Major developmental efforts are needed in this area.

## Training Materials and Resources for Program Evaluation

Most of the approaches have been developed in response to the need for training materials and resources for state agency program evaluators. The level of specifity of these approaches varies considerably. Such approaches as the West Virginia RTC materials, Bitter and Goodyear's (1974) Rehabilitation Evaluation: Some Application Guidelines, and Bennett and Weisinger's (1974) Program Evaluation: A Resource Handbook for Vocational Rehabilitation appear to have direct application for state agency program evaluation design. Other approaches, while helpful in conceptualizing program evaluation, seem to need major translation and adaptation prior to use by state agency program evaluators. Since much of the recent effort to develop the area of rehabilitation program evaluation has led to broad models which can expand the definition of evaluation, it may well be an appropriate time to focus on the development of training packages and resources to increase program evaluator skills in utilizing these approaches.

# CHAPTER IV

# FUTURE DIRECTIONS FOR STATE AGENCY PROGRAM EVALUATION

## The Program Evaluation Process

The approaches reviewed support the definition of program evaluation given in the first chapter of this monograph. The recent interest in program evaluation in state rehabilitation agencies has been stimulated by a concurrent interest in the development and use of a program development process which enables state agency personnel to make data-based decisions about rehabilitation programs.

The goal of program development is to plan, implement, and continuously improve state vocational rehabilitation programs which achieve specified client outcomes in defined client groups using efficient and effective services appropriate to available staff and resources. To implement this goal a program development cycle can be used on a continuous basis. This cycle includes the following steps: (1) identify potential client populations; (2) define the needs of the potential client populations; (3) specify client outcomes based on needs; (4) design program activities to achieve outcomes; (5) implement and monitor program activities; (6) measure client achievement of outcomes; (7) make judgments about the program; and (8) make program revisions.

State agency program evaluation is an integral part of

this program development process. Program evaluation provides specific information at appropriate points throughout the rehabilitation process enabling personnel at various levels throughout the agency to better understand the total context within which the state agency operates and to make data-based decisions at each step of the program development process. This definition of program evaluation broadens evaluation considerably. Program evaluation is no longer defined as primarily concerned only with the design, collection, and analysis of data. Rather, program evaluation is a process which parallels and supports the program development process. This process includes such ongoing activities as providing information about the potential client population, helping the agency staff specify program objectives, providing data needed to monitor programs, determining criteria for making program judgments, providing information needed for making program judgments, interpreting information to make program recommendations, and developing strategies to support program changes.

## A Review of the Current Status of Program Evaluation

### Current Status of the States

Chapter II reviewed two major studies which provide insight into the development of program evaluation in state agencies during the past 10 years. Results from a survey of state agencies conducted in 1973 prior to the introduction

of the nine Federal standards (Collignon, 1973; Ridge, 1973) indicate that:

1. States were developing program evaluation units but these units were limited in size.
2. Program evaluation staff were most often counselors who had been reassigned and who had limited program evaluation training.
3. There was minimal involvement of state agency staff at various levels in the design of evaluation procedures.
4. In general, evaluation studies focused on specific programs and were often crisis oriented to explain problems after-the-fact.
5. Case review procedures were most commonly used as an evaluation methodology with case flow analysis and follow-up studies less commonly used.
6. Data sources used in program evaluation were primarily limited to R-300 and other readily available data.

Another study conducted by the Arkansas Rehabilitation Research and Training Center after the introduction of the nine Federal standards involved participants from each of the 10 regions (Rubin, 1974). Results from this project indicate that:

1. The standards can be helpful in organizing program evaluation activities to parallel the program development process by suggesting program input,

program process, and program outcome evaluation.

2. A number of new evaluation methodologies are being developed including methods of estimating client population and conducting follow-up studies. These models are well documented and can be adapted by state agencies.
3. States recognize the need to improve data bases since attempts to utilize existing data, e.g., R-300 data, reveals that these data are too often incomplete, inconsistent, and not reported uniformly.
4. States recognize the need to develop methods evaluating new services, e.g., outreach and post-employment services, which are not routinely reported.
5. States recognize the need to define qualitative outcomes of the rehabilitation process and to develop techniques for collecting data related to these outcomes.
6. States recognize the need to consider client subgroups when evaluating rehabilitation outcomes because of the diversity of the rehabilitation client population.

Current Status of Approaches Designed to Assist State Agencies

Chapter III reviewed nine approaches which have been developed to assist state agencies in program development. These were primarily designed to provide comprehensive

definitions of the evaluation process, to organize concepts related to program evaluation into usable models, to develop broad evaluation strategies, and to train program evaluators in specific evaluation techniques. The review of these approaches indicates the following:

1. There are several components of evaluation design which should be considered when designing program evaluation. These components include: purpose, level, type, criteria, methodology and measures. Each of these components should be specified prior to the implementation of the evaluation design.
2. Evaluation is a process which includes several steps. Program evaluators need to design specific strategies for each of these steps. Considering all steps of the evaluation process insures that program evaluation will be an integral part of state agency program development and change. Use of the program evaluation process suggests that the program evaluator is involved with other agency staff in the process of setting program objectives and designing rehabilitation programs, and that he/she is also a change agent who recommends and gains support for program changes.
3. Evaluation needs to recognize that there are multiple variables which impact on rehabilitation outcomes. There is a need to expand the variables examined in evaluation beyond immediate treatment

variables to variables related both to the total agency as a complex organization (management styles, communication patterns, etc.) and to the broader socio-economic context (legislation, labor market, social attitudes, etc.).

4. Evaluation needs to consider multiple outcomes of the rehabilitation process. These might include terminal final outcomes such as psychosocial functioning, physical functioning, economic independence, and vocational functioning and potential as well as more intermediate outcomes for such services as restoration, counseling, and training.
5. Evaluation needs to expand existing data bases to be more compatible with comprehensive evaluation designs. In the past, evaluation efforts have been too apt to ask only the questions which can be answered with available data. There is a need to develop questions first through application of the program development process, and then to design methods for collecting data needed to answer the questions.
6. There is a need to continue to develop materials and resources to assist state agency program evaluators. Some major efforts have been initiated and should be continued. Many of the approaches are still theoretical and need to be adapted for use in state agencies.

## Future Directions for State Agency Program Evaluation

Based on the generalizations drawn about the state-of-the-art of program evaluation in state agencies, a number of future directions seem indicated. These can be grouped into activities which will continue and adapt the major efforts which have occurred in the past 10 years, and new efforts which respond to recognized needs.

### Continuation and Adptation of Existing Efforts

The following activities would support and maintain some of the major efforts which have occurred in the past.

1. Consolidation of Models - There are several models which attempt to describe the design components which need to be considered in program evaluation. These are quite similar but are confused by differences in terminology. In general, they specify six design components including purpose, level, type, criteria, methodology and measure. It would be helpful to describe categories for each of these six components, to clarify difference in terminology, and, more important, to develop training materials to help state agency program evaluators understand the importance of these six components and learn to utilize these components in designing evaluation.
2. Specification of Evaluation Process - Of equal

importance to understanding and utilizing the six design components is utilization of the program evaluation process. Perhaps the single most important principle of program evaluation is that it exists to support the program development process within state agencies. Although several writers have described the evaluation process, there is a lack of materials which guide program evaluators in the use of this process. It, therefore, seems important to develop materials which will help program evaluators in the systematic use of the evaluation process.

3. Dissemination of Methodologies and Measures - The literature review indicated that most of the literature related to state agency program evaluation focuses on specific evaluation methodologies, measures, instruments, and/or indices. The Handbook developed by Bennett and Weisinger (1974) was an important step in disseminating these resources. It seems important to continue this type of effort. An annual catalog of newly developed methodologies and measures is needed. This type of dissemination needs to be done on a continuing basis.

4. Make Measures Available - The literature review also indicated that there are numerous measures (e.g., questionnaires, interview schedules, attitude scales) available. These are mentioned

in the literature but are not commercially available. Therefore, each state is currently responsible for obtaining those measures which they might want to use or adapt for use from a variety of sources. There is a need to have one central source collect these measures and make them available to states. This might be done by announcing the measures and then making specific measures available on request.

5. Periodic Survey of Current Status of State Agencies - The survey of state agencies (Ridge, 1973; Collignon, 1973) was most helpful in understanding the current status of program evaluation. It is unfortunate that a basic survey has not been repeated periodically since then. Such a survey should focus on questions which clarify the needs of state agencies in the area of program evaluation rather than simply describing the status quo. The review of various approaches highlights the need for materials developers to better understand the current needs of the states.

6. Coordinate Existing Efforts - This review showed a startling diversity of approaches but, in spite of this, there do seem to be some broad areas of agreement. Program evaluation in rehabilitation has been in a highly developmental phase during the past 10 years. It may well be an appropriate time to seek consensus about some common definitions

and assumptions and about high priority areas of development. The Rehabilitation Services Administration Participatory Planning Conferences during this year are an important contribution. Continuing coordination of efforts is needed.

New Developmental Areas

Many of the materials reviewed highlighted major developmental needs in the areas of program evaluation. Although some of these areas may already be under development, the results of these efforts are not currently available for use by state agencies. Four basic needs which were identified are: (1) need to develop a catalog of multiple outcomes of the rehabilitation process; (2) need to develop a catalog of a wide range of variables (treatment, agency, external to agency) which can potentially impact on rehabilitation outcomes; (3) need to improve data bases and measures and to link these to specific rehabilitation outcomes; and (4) need to specify reasonable outcomes for specific client groups which recognize the differences among groups.

These needs are major and will require considerable developmental work to address. The following developmental activities can provide a systematic response to these needs:

1. Document the Program Development/Program Evaluation Process - A clear description is needed of the parallel and dependent efforts between rehabilitation program development and program evaluation. This

statement should include a description of the steps involved in the planning and delivery of rehabilitation programs, e.g., needs assessment, goal setting, program design, program delivery, outcome evaluation, program judgments, and program changes. It should also include a description of the key point throughout this planning process where program evaluation information is needed to improve decision-making.

2. Develop a Taxonomy of Rehabilitation Outcomes - A taxonomy of rehabilitation outcomes is needed. This taxonomy should describe (1) broad domains of rehabilitation outcomes (e.g., psychosocial functioning, physical functioning, economic independence, and vocational functioning and potential); (2) specific terminal (end of rehabilitation process) outcomes related to each of the broad domains; and (3) intermediary (during program) outcomes which could be used to monitor client progress throughout the rehabilitation process. This taxonomy would help define the nature of the rehabilitation process. At present, evaluation is focusing primarily on terminal outcomes. This means that little pre-assessment and during program data are available. Such early monitoring is essential for the adjustment of services and for identifying real changes resulting from the rehabilitation process.

3. Develop a Catalog of Measures Related to Outcomes - Once a taxonomy of outcomes is developed, existing measures should be linked to specific outcomes and new measures should be developed where necessary. This, of course, is a massive effort requiring the cooperation of state agencies and developmental groups. Use of the taxonomy of outcomes could, however, guide efforts in this area. It would respond to the existing needs to specify uses of existing measures and to guide the development of new measures.

4. Relate Outcomes to Rehabilitation Services - As the taxonomy of outcomes was developed, it could be related to existing areas of rehabilitation services, e.g., outreach, assessment, counseling, restoration, or training. This would help provide guidelines for determining what outcomes might be expected to occur during particular stages in the rehabilitation process. At present, it is not clear what criteria are used to determine changes in client status. Perhaps it is possible to base changes in status on the achievement of specific intermediary outcomes. This would help counselors become more systematic in the delivery of services.

5. Description of Variables in the Vocational Rehabilitation System - There is a need to identify and measure the multiple variables impacting on

rehabilitation outcomes. Using a systems model, it would be possible to describe the typical state rehabilitation agency and its socio-economic content, and specify the range of variables which might impact on rehabilitation outcomes. Once the variables have been identified, a list of indicators should be developed which could be utilized in evaluation efforts.

6. Train Program Evaluators to Use the Evaluation System - The developmental activities described thus far are components of an evaluation system. They include: (1) a program development/program evaluation process guide; (2) a taxonomy of rehabilitation outcomes; (3) a catalog of measures related to outcomes; (4) a guide to relate rehabilitation outcomes to rehabilitation services; and (5) a catalog of indicators for variables impacting on rehabilitation outcomes. These products would provide a system which could be used within state agencies to design ongoing evaluation efforts which support the program development process. This system would be flexible and would provide the process and the content for evaluation design. Effective use of the evaluation system would depend on training state agency program evaluators to use the system to design evaluation procedures appropriate to the needs of their own agency.

## Summary of Future Directions

This chapter has reviewed a working definition of the program evaluation process, summarized generalizations about the current status of state agency program evaluation, and suggested future directions for developmental efforts to support state agency program evaluation. Future directions have been grouped into those efforts which will support developments of the past 10 years, and those efforts which have the potential to respond to recognized needs. Activities designed to continue past efforts include: (1) consolidation and clarification of existing program evaluation models; (2) development of training materials to develop skills in using the evaluation process; (3) continued dissemination of methodologies and measures; (4) development of a central dissemination point to make measures available to states; (5) periodic survey of current status of state agencies; and (6) coordination of existing efforts. Activities designed to respond to recognized needs include the development of an evaluation system and of training materials to support effective use of that system within state agencies. Components of the system would include: (1) a program development/program evaluation process guide; (2) a taxonomy of rehabilitation outcomes; (3) a catalog of measures related to outcomes; (4) a guide to relate rehabilitation outcomes to rehabilitation services; and (5) a catalog of indicators for variables impacting on rehabilitation outcomes.

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